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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,876	04/09/2004	Daniel Breen	SSB0005	9271

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KING & SPALDING LLP (CITI CUSTOMER NUMBER)

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EXAMINER

SUBRAMANIAN, NARAYANSWAMY

ART UNIT

PAPER NUMBER

3691

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/820,876

Applicant(s)

BREEN ET AL.

Examiner

Narayanswamy Subramanian

Art Unit

3691

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/02)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to applicants' communication filed on October 24, 2007. Claims 1-30 are currently pending and have been examined. The rejections and response to arguments are stated below.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 1-30 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory Subject matter.

35 USC 101 requires that in order to be patentable the invention must be a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" (emphasis added). It is not clear as to which statutory class the claimed invention belongs.

The claimed invention does not fall in the process category for the following reason. Quoting from *In re Comiskey* (No. 06-1286, Federal Circuit) "The Supreme Court has recognized only two instances in which such a method may qualify as a section 101 process: when the process 'either [1] was tied to a particular apparatus or [2] operated to change materials to a 'different state or thing.'" *In Diehr*, the Supreme Court confirmed that a process claim reciting an algorithm could state statutory subject matter if it: (1) is tied to a machine or (2) creates or involves a composition of matter or manufacture.¹² 450 U.S. at 184. There, in the context of a process claim for curing rubber that recited an algorithm, the Court concluded that

“[t]ransformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.” *Id.* (quoting *Benson*, 409 U.S. at 70);¹³ see also *In re Schrader*, 22 F.3d 290, 295 (Fed. Cir. 1994) (holding when a claim does not invoke a machine, “§ 101 requires some kind of transformation or reduction of subject matter”). Thus, a claim that involves both a mental process and one of the other categories of statutory subject matter (i.e., a machine, manufacture, or composition) may be patentable under § 101. However, mental processes—or processes of human thinking—standing alone are not patentable even if they have practical application. The Supreme Court has stated that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” *Benson*, 409 U.S. at 67 (emphasis added). In *Flook* the patentee argued that his claims did not seek to patent an abstract idea (an algorithm) because they were limited to a practical application of that idea—updating “alarm limits” for catalytic chemical conversion of hydrocarbons. 437 U.S. at 586, 589-90. The Court rejected the notion that mere recitation of a practical application of an abstract idea makes it patentable, concluding that “[a] competent draftsman could attach some form of post-solution activity to almost any mathematical formula.” *Id.* at 590. Since all other features of the process were well-known, including “the use of computers for ‘automatic monitoring-alarming,’” the Court construed the application as “simply provid[ing] a new and presumably better method for calculating alarm limit values.” *Id.* at 594-95. The 14 See AT&T, 172 F.3d at 1355, 1358 (holding patentable “a process that uses the Boolean principle in order to determine the value of the PIC indicator” and that “require[d] the use of switches and computers”); *State Street Bank*, 149 F.3d at 1373 (“[W]e hold that the transformation of data . . .

by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm.” (emphases added)); *Alappat*, 33 F.3d at 1544 (“This is not a disembodied mathematical concept which may be characterized as an ‘abstract idea,’ but rather a specific machine to produce a useful, concrete, and tangible result.” (emphases added)); *Arrhythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1058-59 (Fed. Cir. 1992) (holding patentable a method for analyzing electrocardiograph signals for the detection of a specific heart condition that used “electronic equipment programmed to perform mathematical computation”). Court held the application unpatentable because “if a claim [as a whole] is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.” 437 U.S. at 595 (quoting *In re Richman*, 563 F.2d 1026, 1030 (CCPA 1977)). Following the lead of the Supreme Court, this court and our predecessor court have refused to find processes patentable when they merely claimed a mental process standing alone and untied to another category of statutory subject matter even when a practical application was claimed. In *Schrader* we held unpatentable a “method constitut[ing] a novel way of conducting auctions” by allowing competitive bidding on a plurality of related items. 22 F.3d at 291. In doing so, we rejected the patentee’s argument that the process used a machine. Two of the alleged machines—a “display” in the front of the auction room and “a closed-circuit television system” for bidders in different cities—were not claimed by the patent, and the third—a “record” in which bids could be entered—could be “a piece of paper or a chalkboard.” *Id.* at 293-94. We therefore concluded that the patent impermissibly claimed unpatentable subject matter. Similarly, in *In re Warmerdam*, 33 F.3d 1354 (Fed. Cir. 1994), we held unpatentable a process for controlling objects so as to avoid collisions because

the key steps of “locating a medial axis” and “creating a bubble hierarchy” described “nothing more than the manipulation of basic mathematical constructs, the paradigmatic ‘abstract idea.’” *Id.* at 1360. A machine was not required, *id.* at 1358, nor was there any indication that the process operated on a manufacture or composition of matter. Decisions of our predecessor court are in accord. *In re Meyer*, 688 F.2d 789, 796 (CCPA 1982), held that “a mental process that a neurologist should follow” was not patentable because it was “not limited to any otherwise statutory process, machine, manufacture, or composition of matter.” *Id.* at 795. Similarly, *In re Maucorps*, 609 F.2d 481 (CCPA 1979), held that an invention “[u]ltimately . . . directed toward optimizing the organization of sales representatives in a business” was unpatentable. *Id.* at 482, 486. See also *Alappat*, 33 F.3d at 1541 (“*Maucorps* dealt with a business method for deciding how salesmen should best handle respective customers and *Meyer* involved a ‘system’ for aiding a neurologist in diagnosing patients. Clearly, neither of the alleged ‘inventions’ in those cases falls within any § 101 category.”). The steps of the method are untied to another category of statutory subject matter and hence the claimed invention does not qualify as a process under 35 U.S.C 101.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marlowe-Noren (US Pub. No. 2004/0193536 A1) in view of Ritchken Reference.

Claim 1, Marlowe-Noren teaches the step of issuing a hybrid security comprising issuing a convertible security and two other instruments related to the convertible security (See Marlowe-Noren Abstract, Paragraphs 18-30). The conversion ratio for the convertible security is interpreted to include 100.

Marlowe-Noren does not explicitly teach the feature of a call spread with the counterparty, comprising the steps of: buying from the counterparty a first call option having a second potential financial benefit the same as the first potential financial benefit; and selling to the counterparty a second call option with a higher strike price than the first call option that when exercised provides a third potential financial benefit different from the second potential financial benefit. The limitation of “that when exercised provides a third potential financial benefit different from the second potential financial benefit” is interpreted as intended use of the respective option and hence not given patentable weight.

Ritchken Reference teaches a call spread comprising buying from a counterparty a first call option and selling to the counterparty a second call option with a higher strike price than the first call option (See Ritchken bottom of page 48). Call options that are traded on the exchange enable investors to purchase 100 shares of the underlying instrument. In other words call options that are traded on the exchange provide the same benefit as the convertible security.

Both Ritchken and Marlowe-Noren are concerned with providing a hybrid financial instrument to the user. It would have been obvious to one of ordinary skill in the art to include the teachings of Ritchken to the disclosure of Marlowe-Noren. The combination of disclosures

suggests that holders would have benefited from exercising the option without extinguishing the underlying convertible instrument.

Claim 12, Marlowe-Noren teaches the step of issuing a convertible security and two other instruments related to the convertible security (See Marlowe-Noren Abstract, Paragraphs 18-30). The conversion ratio for the convertible security is interpreted to include 100.

Marlowe-Noren does not explicitly teach the feature of issuing a first call option from a first counterparty to the issuer having a second potential financial benefit the same as the first potential financial benefit; and issuing a second call option from the issuer to either the first counterparty or a second counterparty that when exercised provides a third potential financial benefit different from the second potential financial benefit. The limitation of “that when exercised provides a third potential financial benefit different from the second potential financial benefit” is interpreted as intended use of the respective option and hence not given patentable weight.

Ritchken Reference teaches a call spread comprising buying from a counterparty a first call option and selling to the counterparty a second call option with a higher strike price than the first call option (See Ritchken bottom of page 48). Call options that are traded on the exchange enable investors to purchase 100 shares of the underlying instrument. In other words call options that are traded on the exchange provide the same benefit as the convertible security.

Both Ritchken and Marlowe-Noren are concerned with providing a hybrid financial instrument to the user. It would have been obvious to one of ordinary skill in the art to include the teachings of Ritchken to the disclosure of Marlowe-Noren. The combination of disclosures suggests that holders would have benefited from exercising the option without extinguishing the underlying convertible instrument.

Claim 28, Marlowe-Noren teaches a method for performing a financial transaction, the method comprising the steps of: issuing from the issuer to the investor the convertible security providing a first potential financial benefit, wherein the convertible security is convertible into a first predetermined number of units of an underlying security and buying by an issuer from the first counterparty, with at least a portion of the proceeds from the issuance of the convertible security, a second financial instrument upon the occurrence of a first predetermined event; and (See Marlowe-Noren Abstract, Figure 2, Paragraphs 18-30). The conversion ratio for the convertible security is interpreted to include 100.

Marlowe-Noren does not explicitly teach the feature of the second financial instrument being a call option and selling by an issuer, simultaneous to the buying of the first call option, to the second counterparty the second call option with a higher strike price than the first call option that when exercised provides a third potential financial benefit different from the second potential financial benefit, wherein the second call option exercisable to purchase a third predetermined number of units of the underlying security upon the occurrence of a second predetermined event. However, the limitation “that when exercised provides a third potential financial benefit different from the second potential financial benefit, wherein the second call option exercisable to purchase a third predetermined number of units of the underlying security upon the occurrence of a second predetermined event” is interpreted as intended use of the respective option and hence not given patentable weight. This limitation does not affect the steps of buying a call option by an issuer from the first counterparty and selling by an issuer, simultaneous to the buying of the first call option, to the second counterparty the second call option with a higher strike price than the first call option.

Ritchken Reference teaches a call spread comprising buying from a counterparty a first call option and selling to the counterparty a second call option with a higher strike price than the first call option (See Ritchken bottom of page 48). Call options that are traded on the exchange enable investors to purchase 100 shares of the underlying instrument. In other words call options that are traded on the exchange provide the same benefit as the convertible security.

Both Ritchken and Marlowe-Noren are concerned with providing a hybrid financial instrument to the user. It would have been obvious to one of ordinary skill in the art to include the teachings of Ritchken to the disclosure of Marlowe-Noren. The combination of disclosures suggests that holders would have benefited from exercising the option without extinguishing the underlying convertible instrument.

Claims 2-11, 13-27 and 29-30, the features in these claims are either disclosed in the combined disclosure of Ritchken and Marlowe-Noren or are old and well known in the art. Combining the features of derivative instruments with traditional instruments like convertible bonds/preferred stocks makes the offering more attractive to the investors compared to traditional straight offering and it also provides tax advantages to the issuer. Hence it would have been obvious to include these features to the combined disclosures of Marlowe-Noren and Ritchken.

Response to Arguments

6. In response to Applicant's arguments "The Pending Claims Do Not Recite "Two Other Instruments"", the examiner respectfully disagrees. For instance claim 1 recites the limitation "buying from the counterparty a first call option and selling to the counterparty a second call

option". Clearly these are two other instruments besides a convertible security recited in the same claim.

In response to Applicant's arguments "Ritchken cannot teach or suggest a first call option having a second potential financial benefit the same as the first potential financial benefit", the examiner respectfully disagrees. In the rejection discussed above, the convertible enables the purchase of 100 shares of the underlying stock in the future. A call option does the same. Hence they both provide the same potential financial benefit.

In response to Applicant's arguments "Even if the Examiner's combination of Marlowe and Ritchken is proper, the combined teachings of Marlowe and Ritchken do not teach or suggest "a first call option having a second potential financial benefit the same as the first potential financial benefit," where the first potential financial benefit is provided by a convertible security", the examiner respectfully disagrees. In the rejection discussed above, the convertible enables the purchase of 100 shares of the underlying stock in the future. A call option does the same. Hence they both provide the same potential financial benefit.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant's other arguments with respect to pending claims have been fully considered but they are not persuasive.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Narayanswamy Subramanian whose telephone number is (571) 272-6751. The examiner can normally be reached Monday-Thursday from 8:30 AM to 7:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached at (571) 272-6771. The fax number for Formal or Official faxes and Draft to the Patent Office is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Narayanswamy Subramanian/
Primary Examiner
Art Unit 3691

January 19, 2008